

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 03PCT389	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/KR2003/001782	International filing date (day/month/year) 01 SEPTEMBER 2003 (01.09.2003)	Priority date (day/month/year) 31 AUGUST 2002 (31.08.2002)	
International Patent Classification (IPC) or national classification and IPC IPC7 D21J 3/00, D21J 1/08, D21H 17/74, D21H 17/03, B60H 3/06			
Applicant KIM, Jung Man			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.
<input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items:
I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 26 MARCH 2004 (26.03.2004)	Date of completion of this report 17 DECEMBER 2004 (17.12.2004)
Name and mailing address of the IPEA/KR Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer SOHN, Chang Ho Telephone No. 82-42-481-5538



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/001782

1. Basis of the report

1. With regard to the elements of the international application:*

 the international application as originally filed the description:pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____ the claims:pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____ the drawings:pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____ the sequence listing part of the description:pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language English which is the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/ or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. The amendments have resulted in the cancellation of: the description, pages _____ the claims, Nos. _____ the drawings, sheets _____5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

v. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-7	YES
	Claims	none	NO
Inventive step (IS)	Claims	1-7	YES
	Claims	none	NO
Industrial applicability (IA)	Claims	1-7	YES
	Claims	none	NO

2. Citations and explanations (Rule 70.7)

The following documents identified in the International Search Report have been considered for this report:

D1 : US 6152979 A

D2 : JP 61-245817 A

D3 : JP 2-298307 A

Claims 1-7 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest any of the embodiments as specifically set forth in the claims.

The invention described in independent claims 1, 5 relates to parts of an air cleaner for automobiles and a method of manufacturing the same.

Document D1 discloses an air cleaner filter element. D2 discloses a preparation of a filter paper type air cleaner. D3 discloses a method of manufacturing the air cleaner element.

Comparing claims 1, 5 with D1-D3, the subject matter of these claims differs from the teachings of D1-D3 in that parts of an air cleaner are obtained by dipping and homogenizing waste paper in a caustic soda aqueous solution, and adding paraffin wax, acrylamide, colloidal silica and polyvinyl alcohol to the solution. The present invention reduces the amount of industrial waste and causes no environmental pollution due to the biodegradability of the waste paper.

Therefore, the subject matter of independent claims 1, 5 is considered to be novel and to involve an inventive step; consequently, the subject matter of dependent claims 2-4,6,7 is also novel and inventive.

Claims 1-7 meet the criteria of PCT Article 33(4), IA, because the invention is industrially applicable.